T0E2h0" 9T5EEZ60

COMMERCE GENERAL ARCHITECTURE

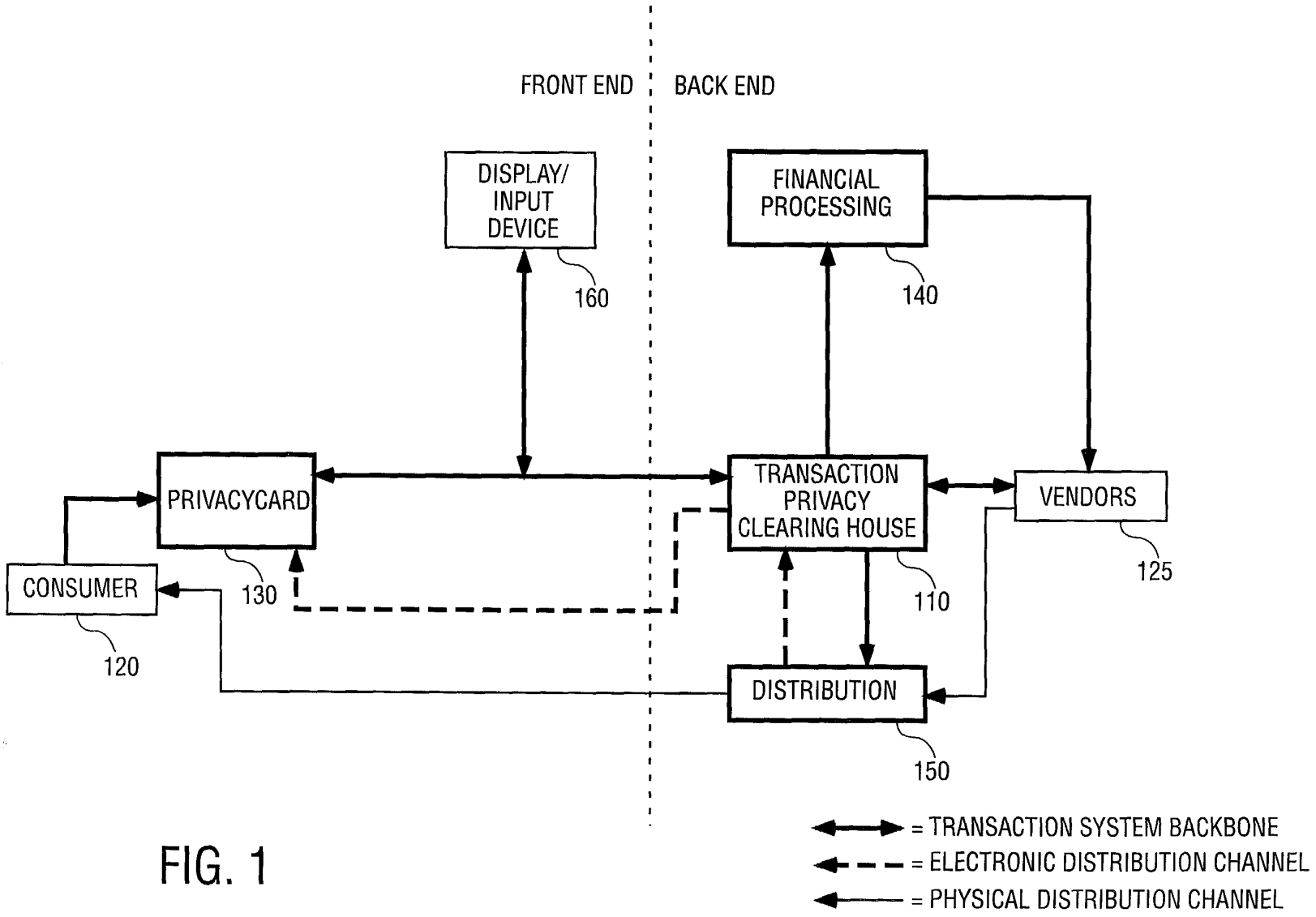


FIG. 1

TOE2HO" 9T5EE260

COMMERCE GENERAL ARCHITECTURE - POS TERMINAL:

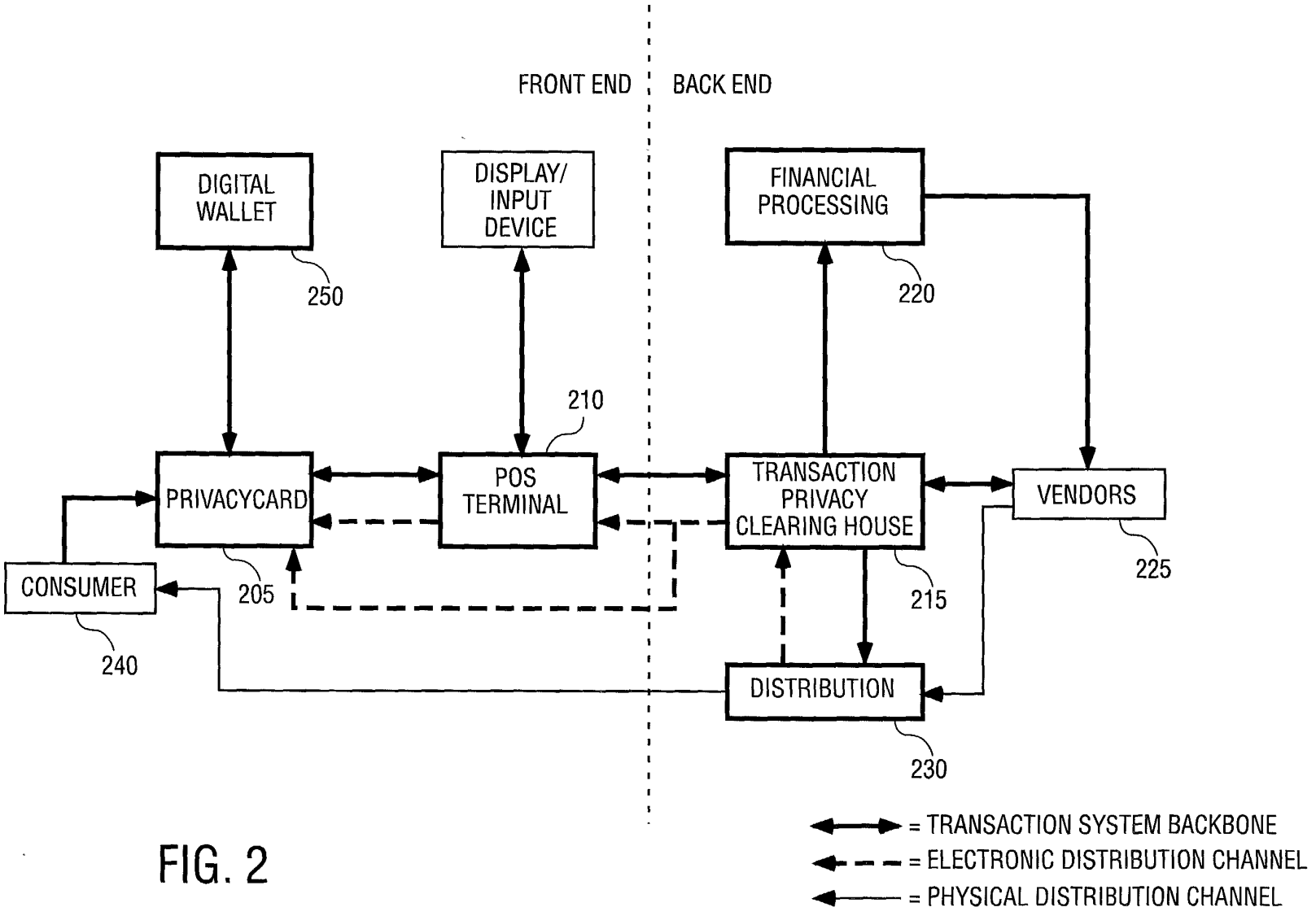


FIG. 2

T0E2h0" 9T5EEZ60

COMMERCE IN-HOME ENVIRONMENT

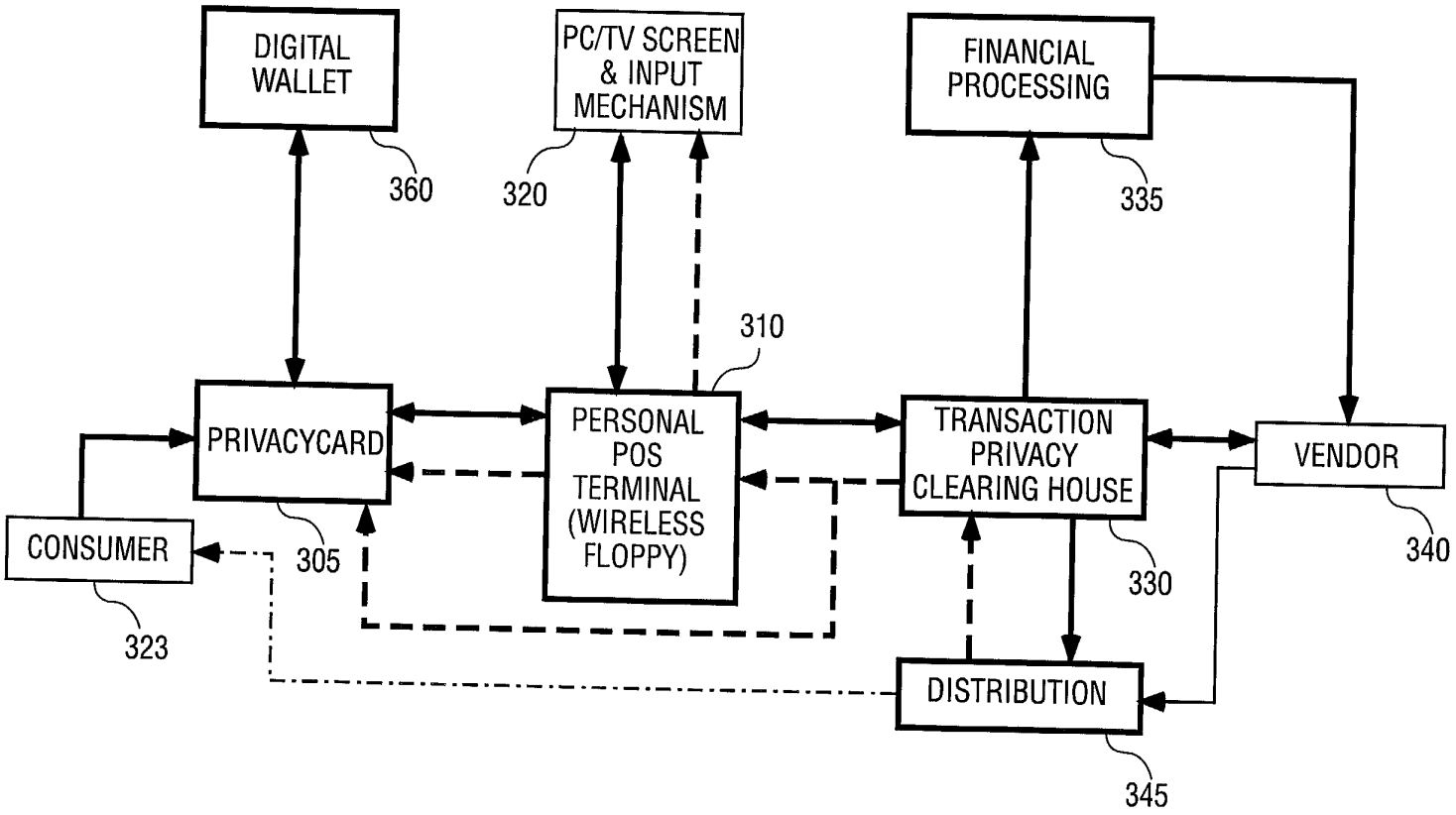


FIG. 3

TOE2HO" 9T55E260

IN-STORE RETAIL ENVIRONMENT

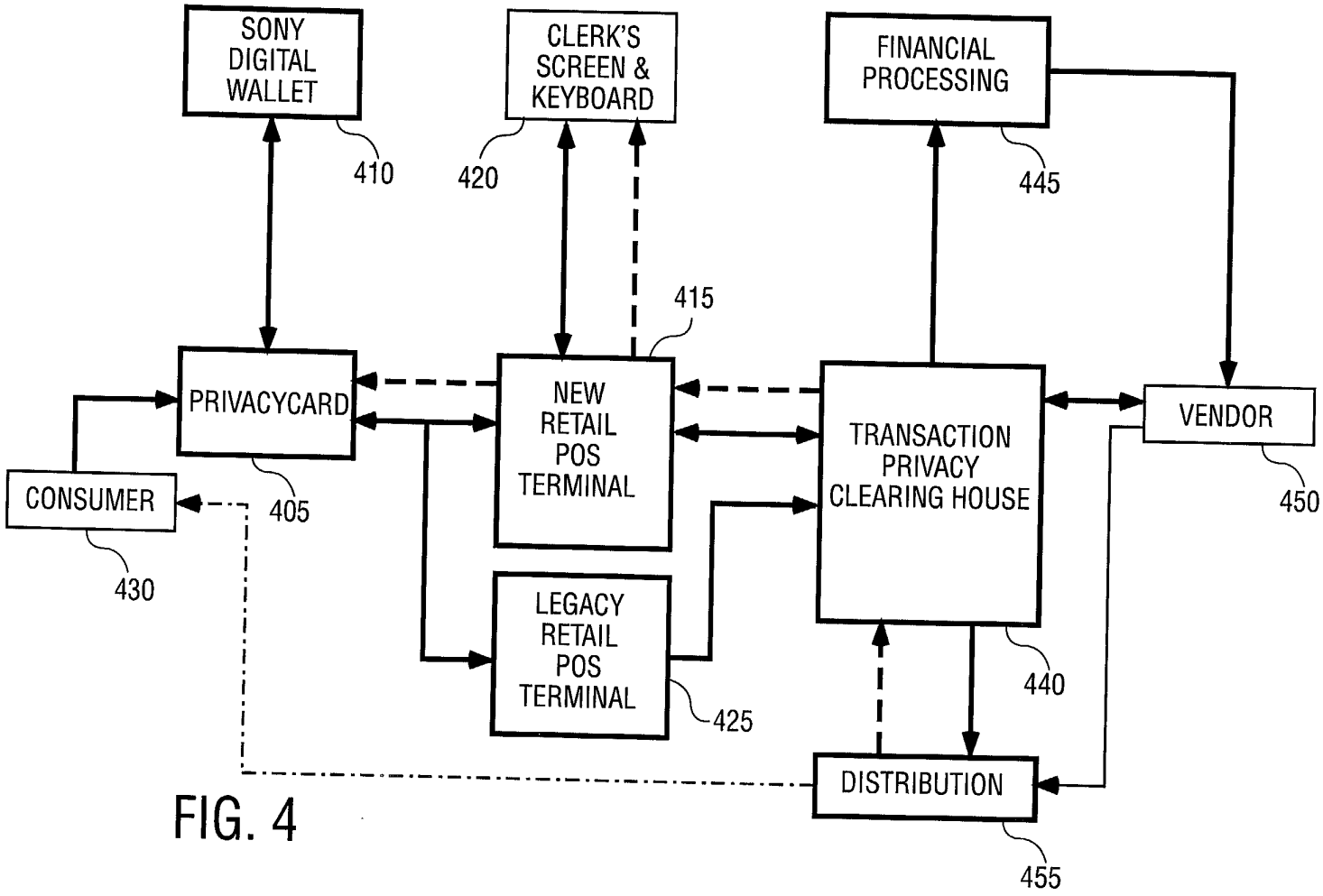
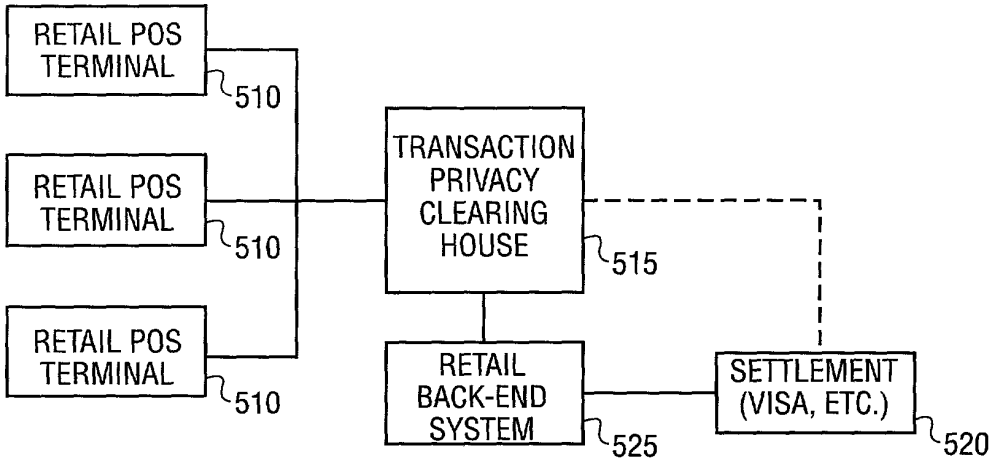
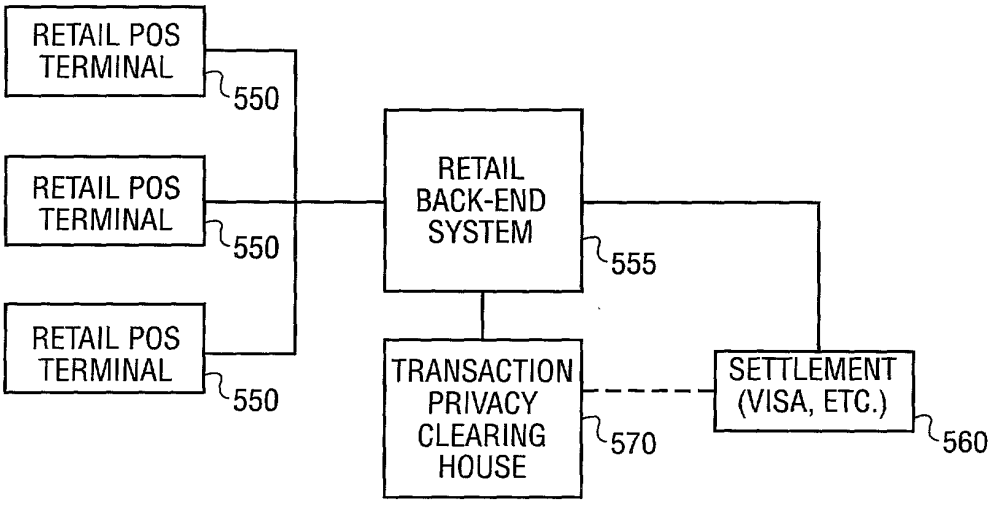


FIG. 4



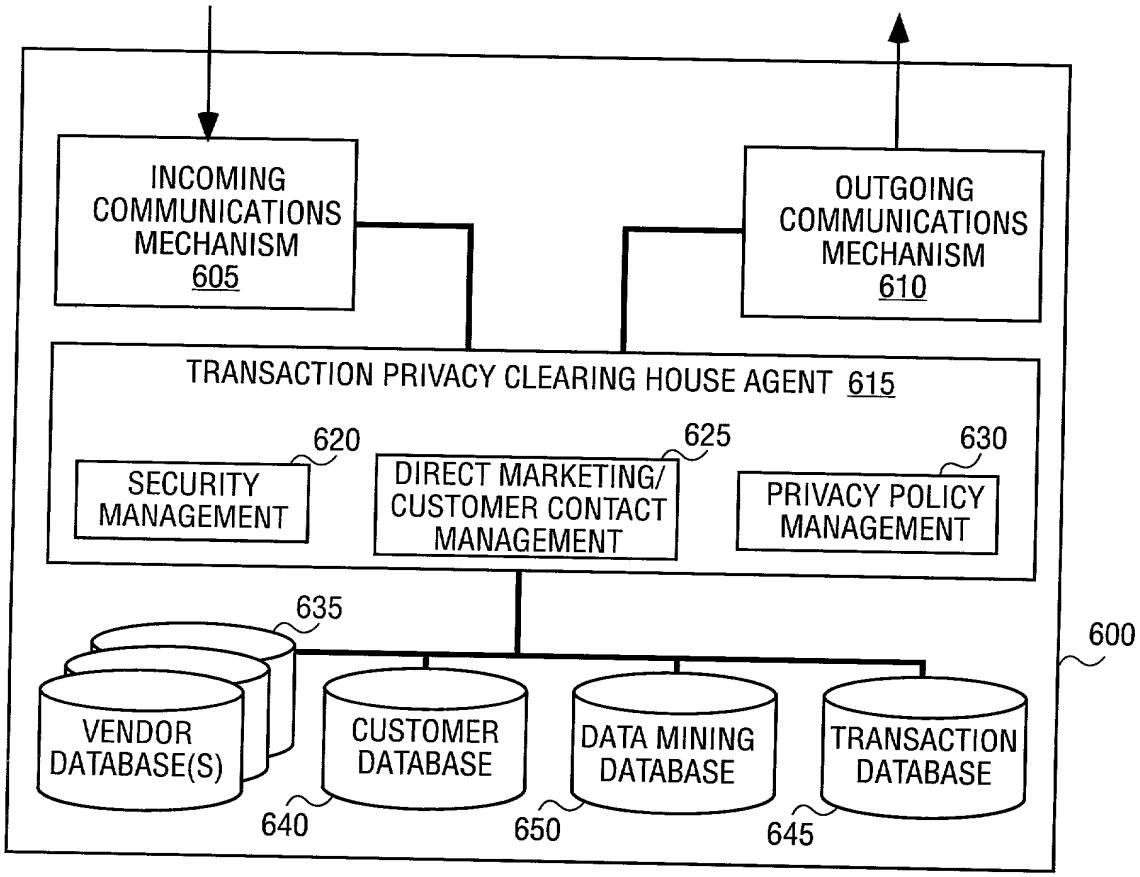
A RETAIL SYSTEM MODIFIED TO SUPPORT THE INTERACTION OF LEGACY POS TERMINAL WITH THE DIGITAL WALLET SYSTEM

FIG. 5A



AN ALTERNATIVE EMBODIMENT OF THE RETAIL SYSTEM MODIFIED TO SUPPORT THE INTERACTION OF LEGACY POS TERMINALS WITH THE DIGITAL WALLET SYSTEM

FIG. 5B



TRANSACTION PRIVACY CLEARING HOUSE: MAJOR COMPONENTS

FIG. 6

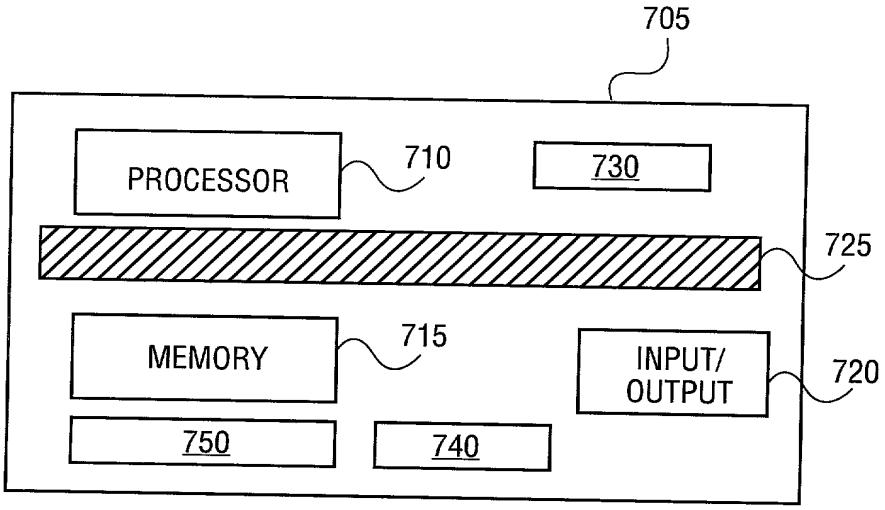

705
PROCESSOR
710
730
725
MEMORY
715
INPUT/
OUTPUT
720
750
740

FIG. 7A

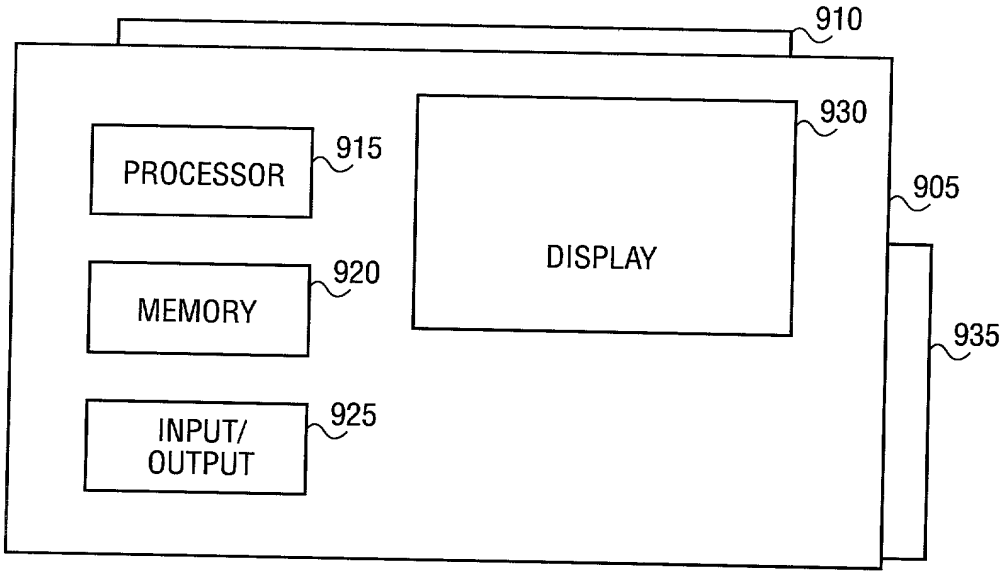

910
930
PROCESSOR
915
905
DISPLAY
MEMORY
920
935
INPUT/
OUTPUT
925

FIG. 9A

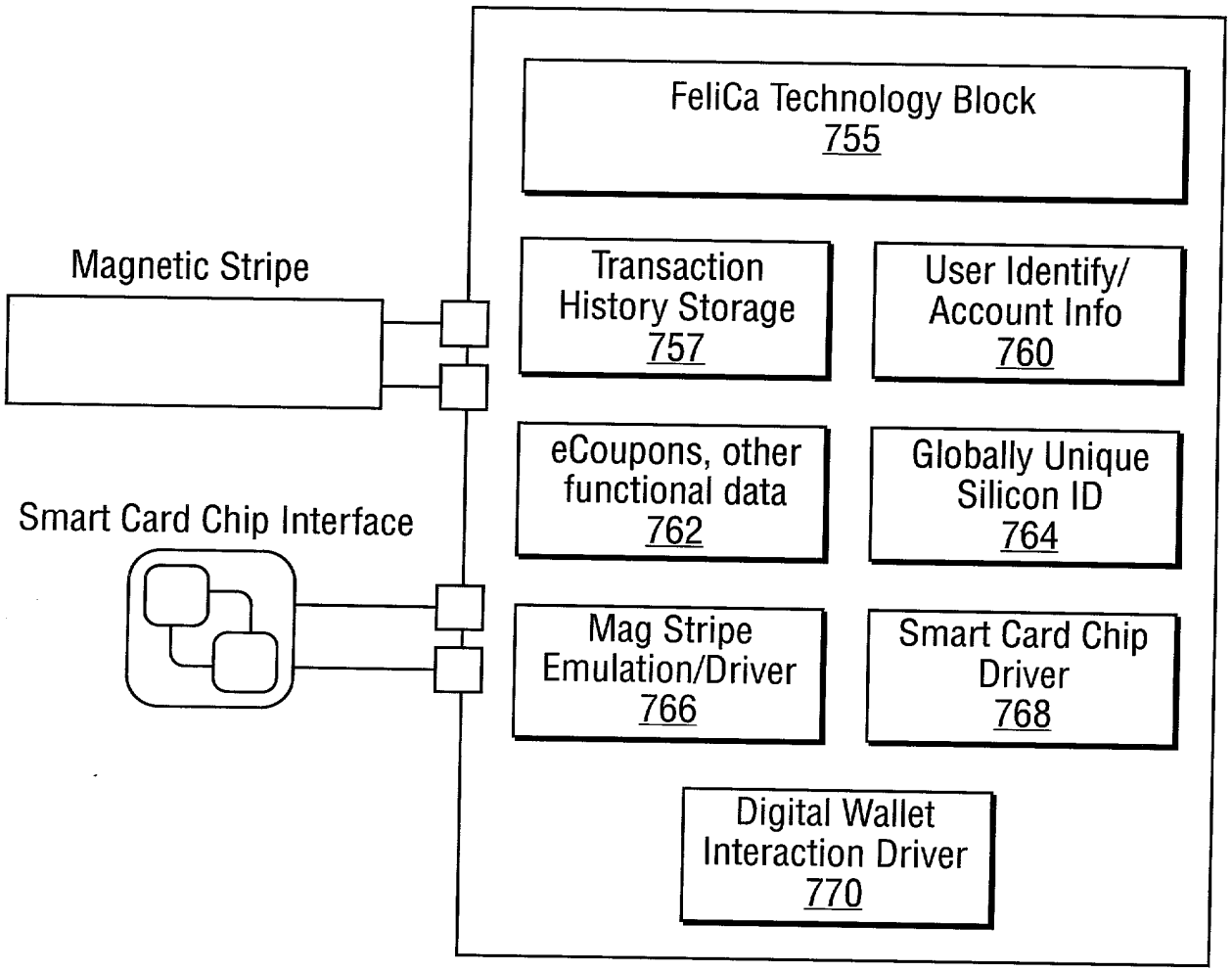

FeliCa Technology Block
755
Magnetic Stripe
Transaction History Storage
757
User Identify/ Account Info
760
eCoupons, other functional data
762
Globally Unique Silicon ID
764
Smart Card Chip Interface
Mag Stripe Emulation/Driver
766
Smart Card Chip Driver
768
Digital Wallet Interaction Driver
770

FIG. 7B

FOSE240 9T9SE260

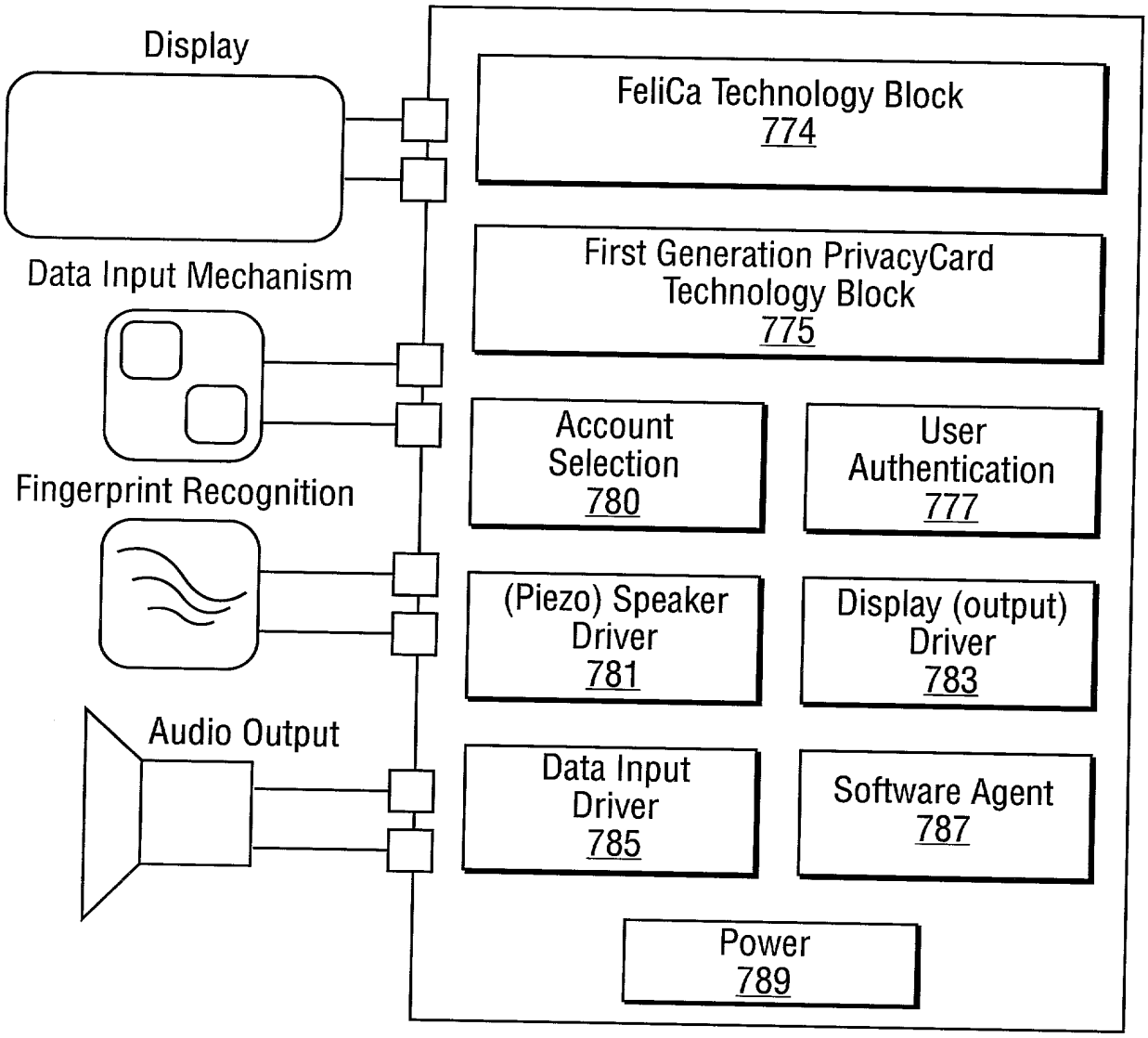
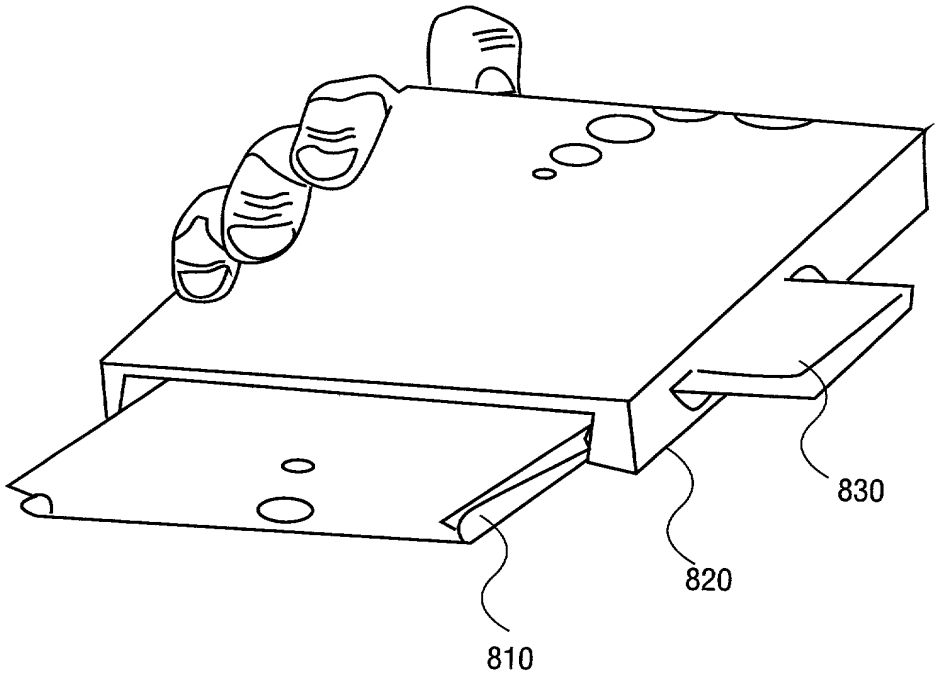


FIG. 7C

TOSHIBA 9TSC2760



DIGITAL WALLET AND PRIVACY CARD

FIG. 8

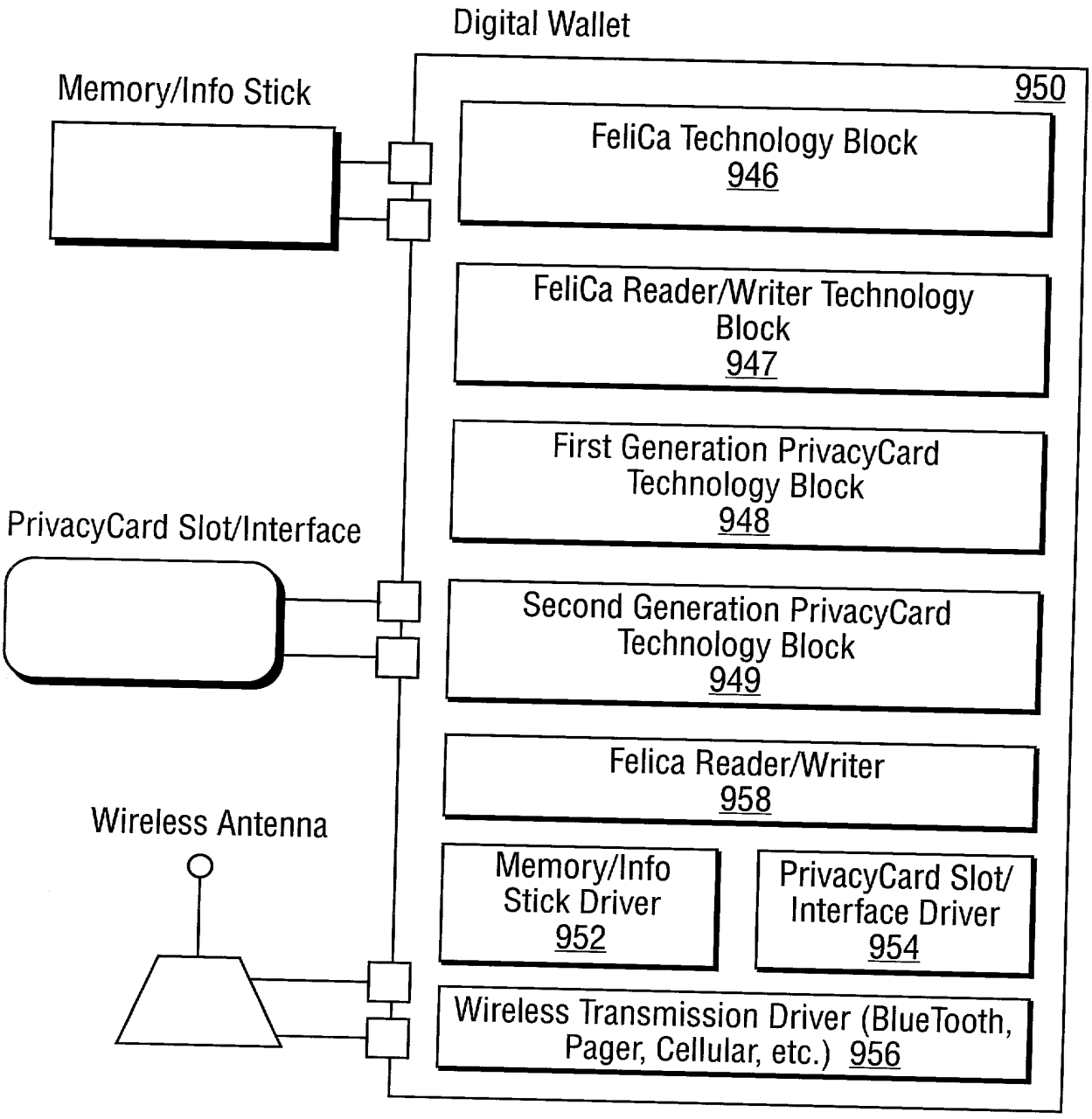
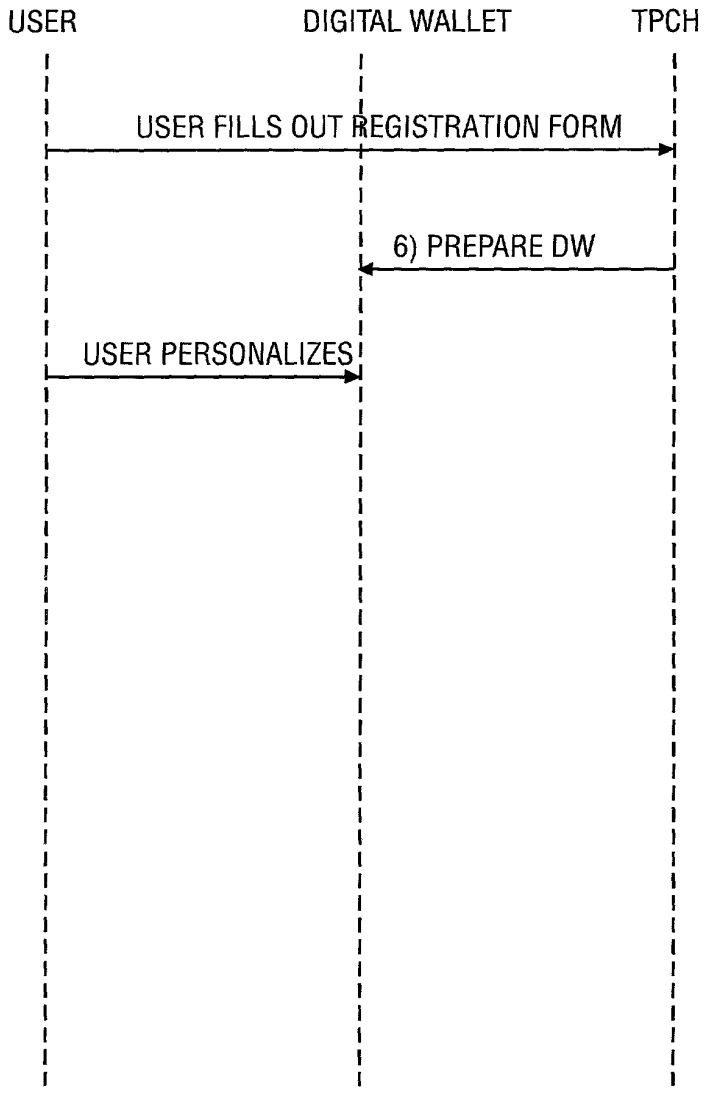

Digital Wallet
950
Memory/Info Stick
FeliCa Technology Block
946
FeliCa Reader/Writer Technology Block
947
First Generation PrivacyCard Technology Block
948
PrivacyCard Slot/Interface
Second Generation PrivacyCard Technology Block
949
Felica Reader/Writer
958
Wireless Antenna
Memory/Info Stick Driver
952
PrivacyCard Slot/ Interface Driver
954
Wireless Transmission Driver (BlueTooth, Pager, Cellular, etc.) 956

FIG. 9B



SETUP OF DIGITAL WALLET

FIG. 10

TOE240 9T5EE260

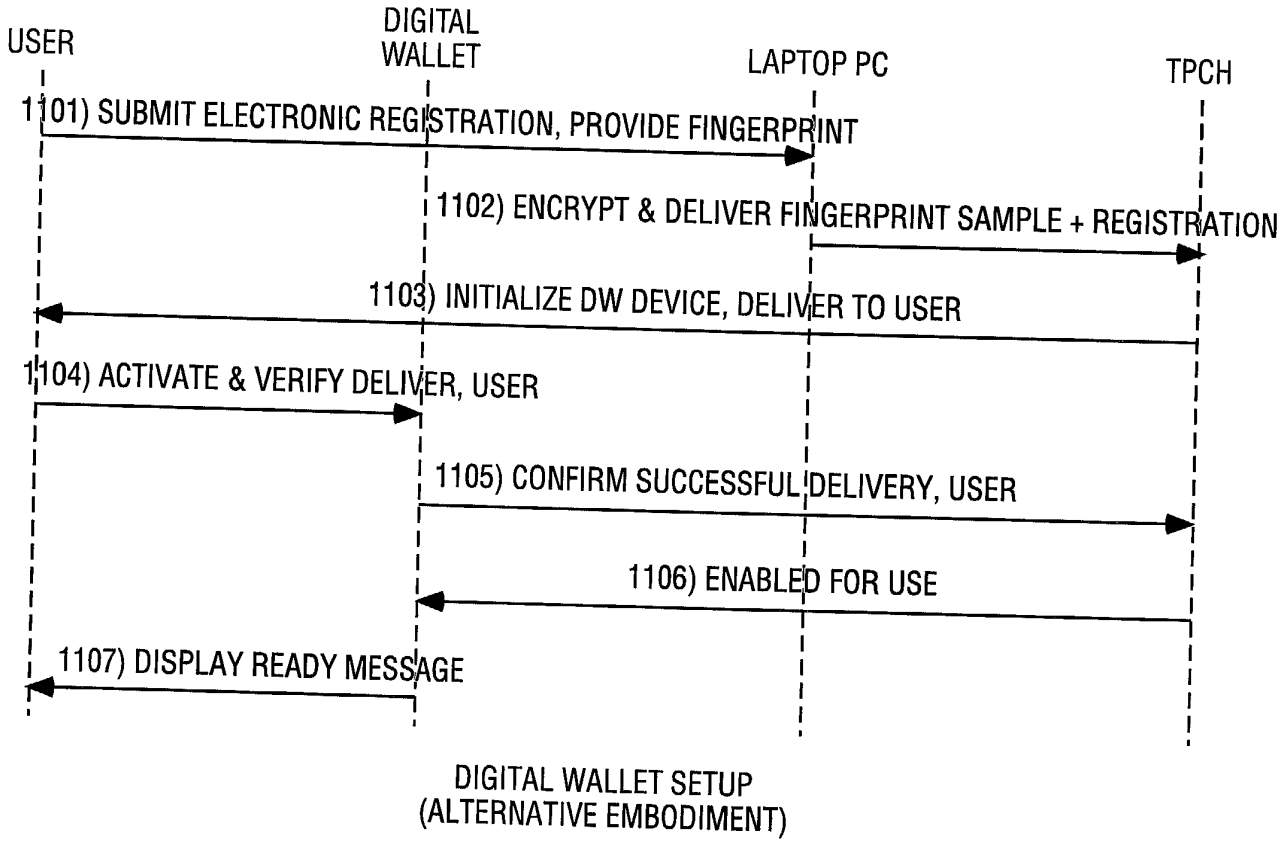
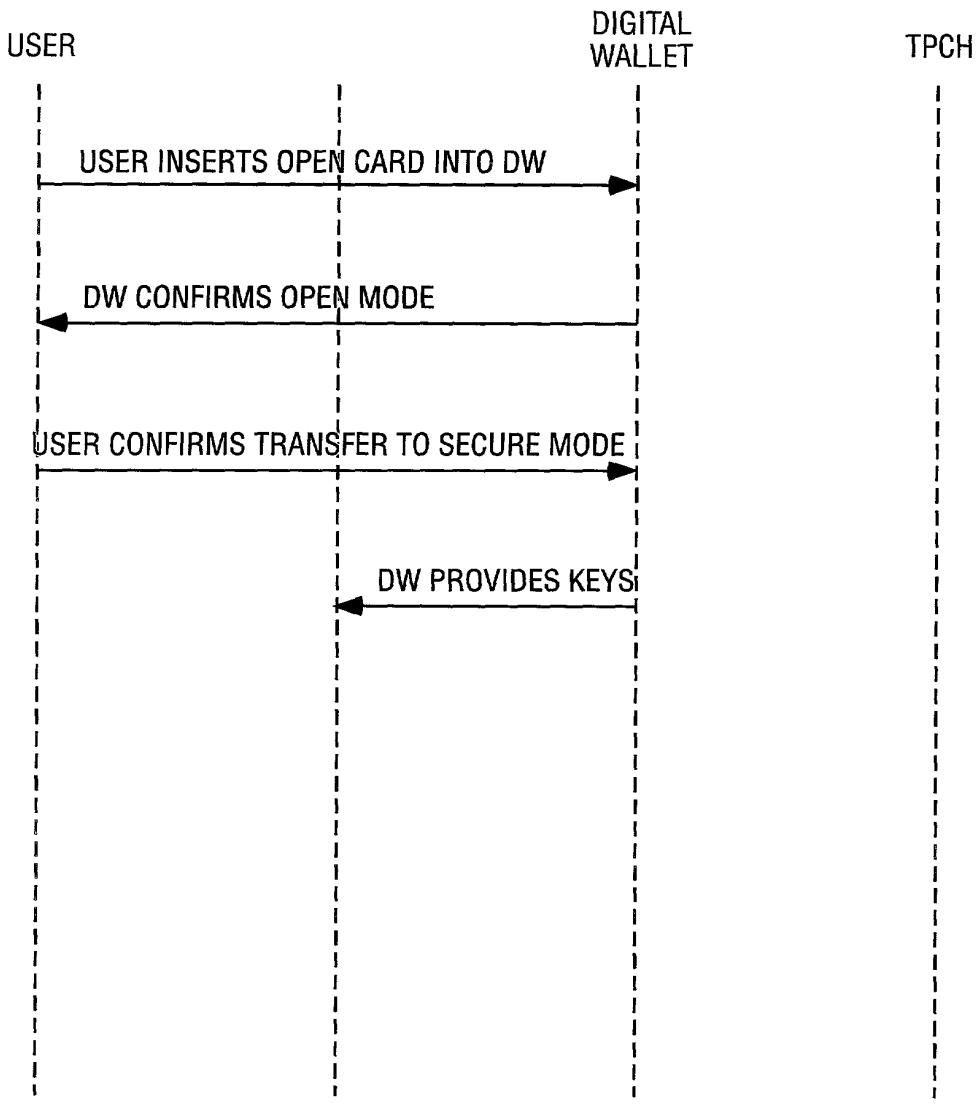


FIG. 11



CONVERSION OF CARD TO SECURE

FIG. 12

TOE240 9T5EE260

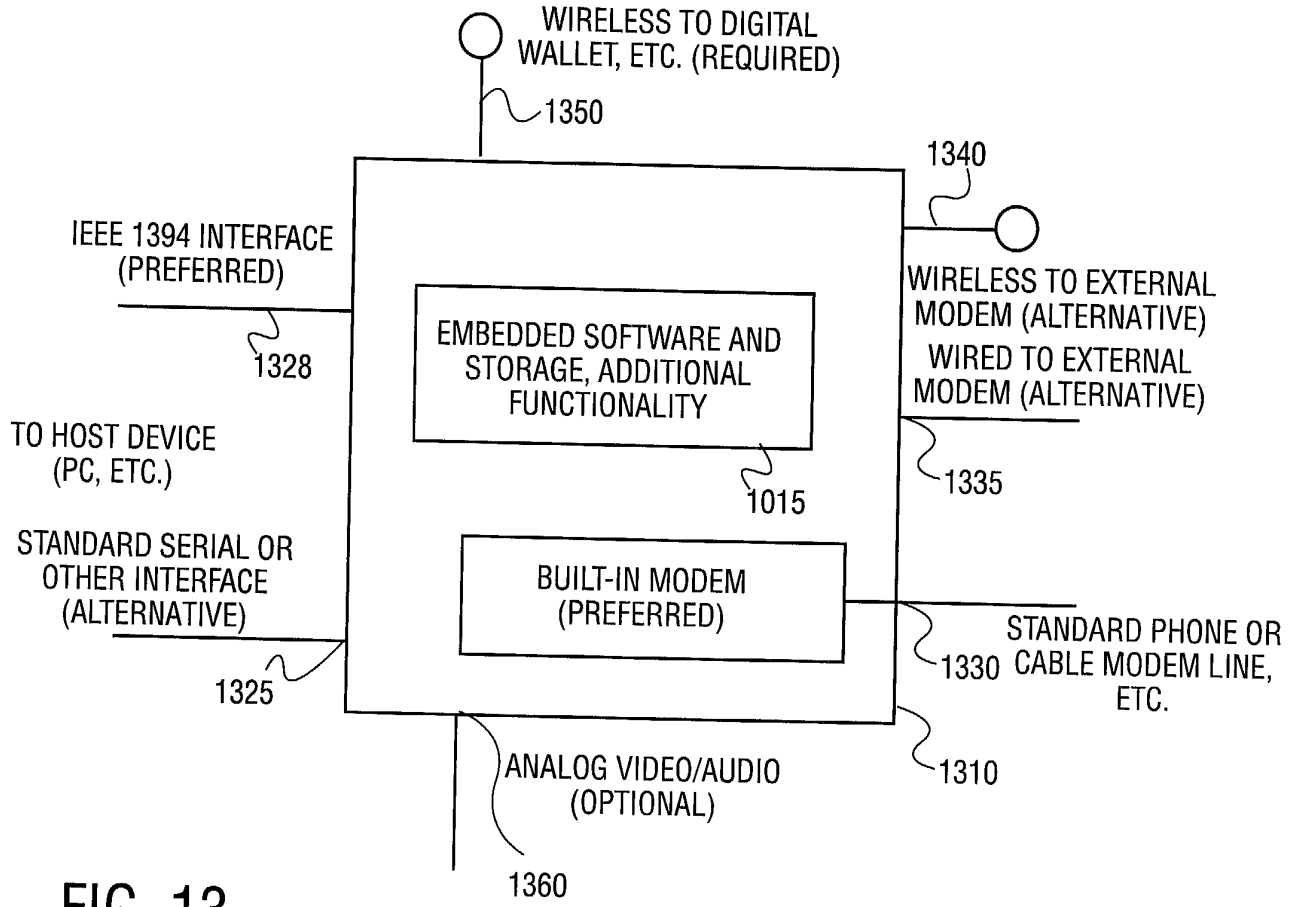


FIG. 13

TOE2tO" 9tSEE260

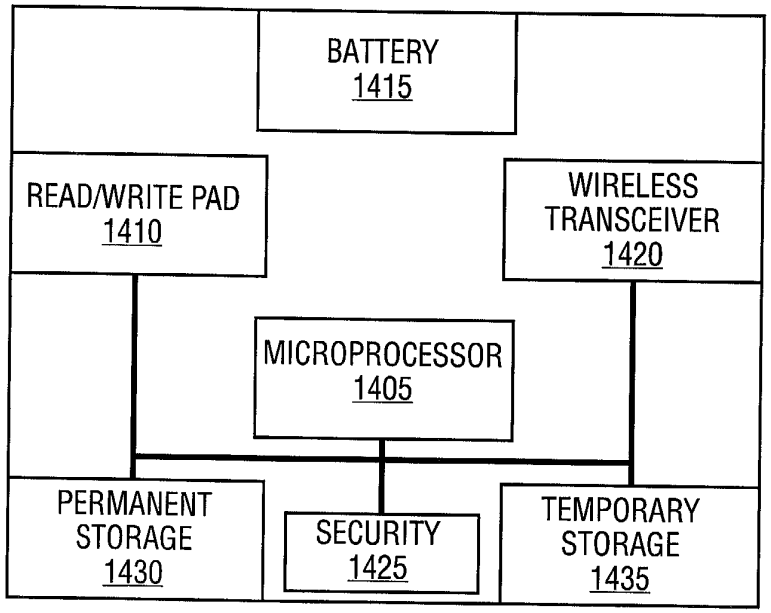


DIAGRAM OF THE MAJOR COMPONENTS OF THE PERSONAL POS, SHOWING THE DATA/ADDRESS BUS INTERCONNECT

FIG. 14

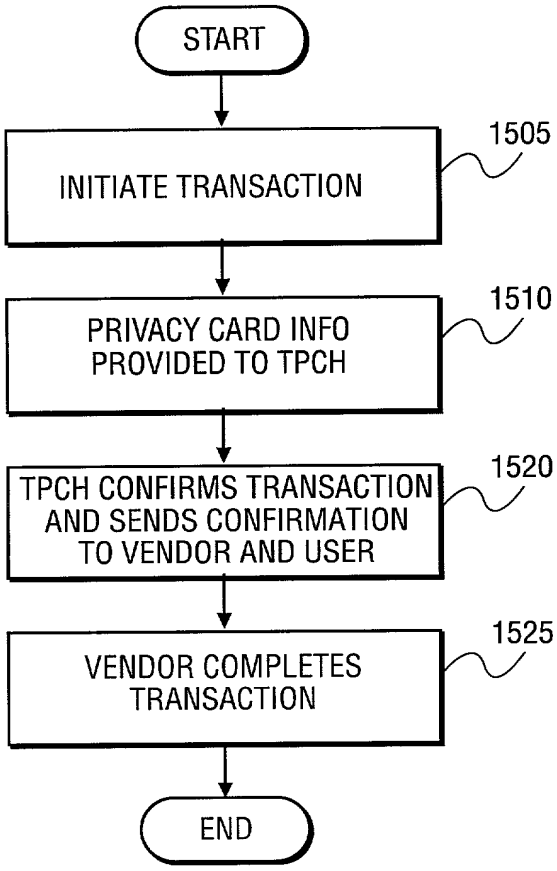

START
INITIATE TRANSACTION
1505
PRIVACY CARD INFO PROVIDED TO TPCH
1510
TPCH CONFIRMS TRANSACTION AND SENDS CONFIRMATION TO VENDOR AND USER
1520
VENDOR COMPLETES TRANSACTION
1525
END

FIG. 15

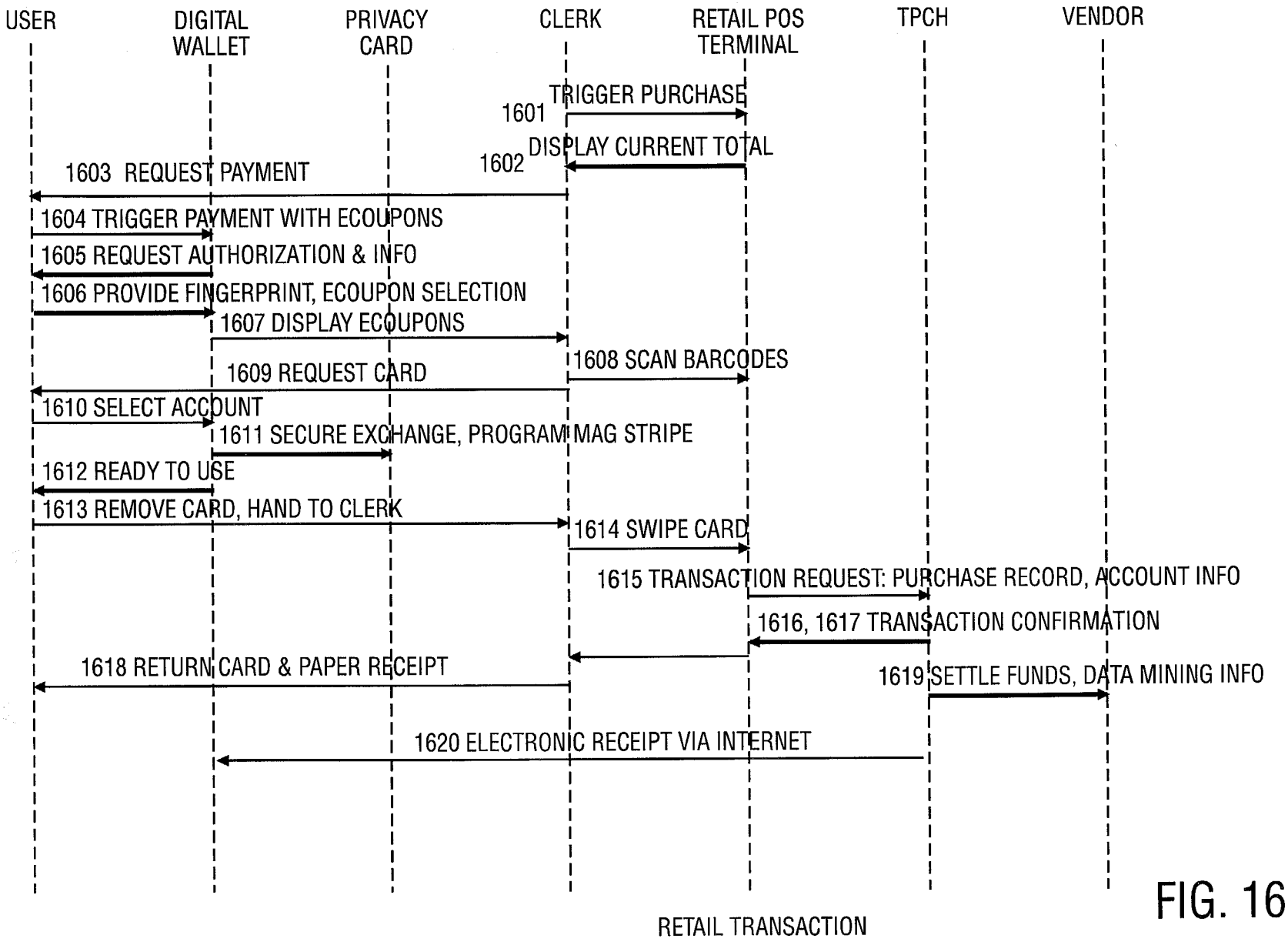

USER
DIGITAL WALLET
PRIVACY CARD
CLERK
RETAIL POS TERMINAL
TPCH
VENDOR
1601 TRIGGER PURCHASE
1602 DISPLAY CURRENT TOTAL
1603 REQUEST PAYMENT
1604 TRIGGER PAYMENT WITH ECOUPONS
1605 REQUEST AUTHORIZATION & INFO
1606 PROVIDE FINGERPRINT, ECOUPON SELECTION
1607 DISPLAY ECOUPONS
1608 SCAN BARCODES
1609 REQUEST CARD
1610 SELECT ACCOUNT
1611 SECURE EXCHANGE, PROGRAM MAG STRIPE
1612 READY TO USE
1613 REMOVE CARD, HAND TO CLERK
1614 SWIPE CARD
1615 TRANSACTION REQUEST: PURCHASE RECORD, ACCOUNT INFO
1616, 1617 TRANSACTION CONFIRMATION
1618 RETURN CARD & PAPER RECEIPT
1619 SETTLE FUNDS, DATA MINING INFO
1620 ELECTRONIC RECEIPT VIA INTERNET
RETAIL TRANSACTION

FIG. 16

TOE2HO" 9T5EE260

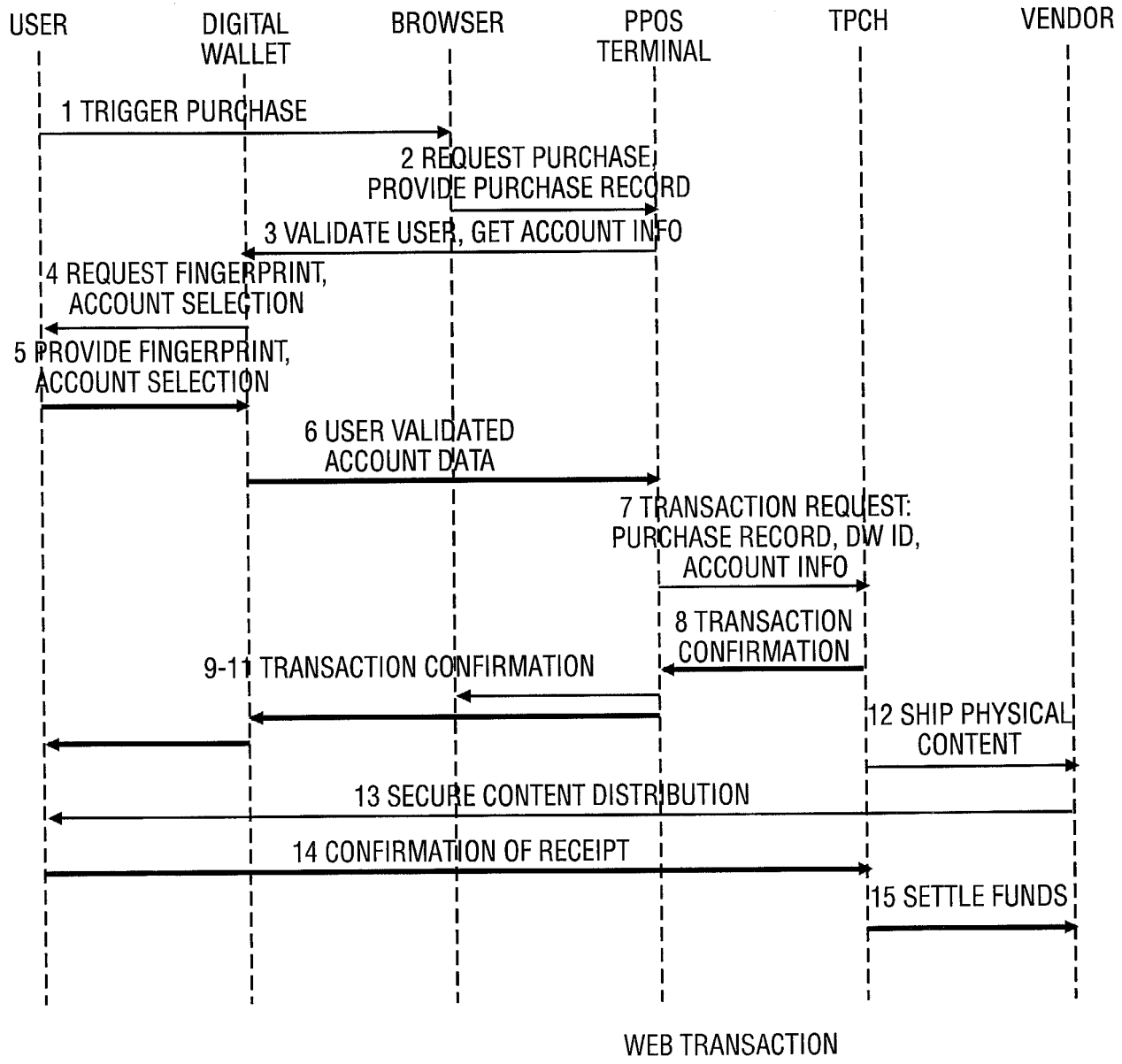


FIG. 17

TOE240" 9T5EE260

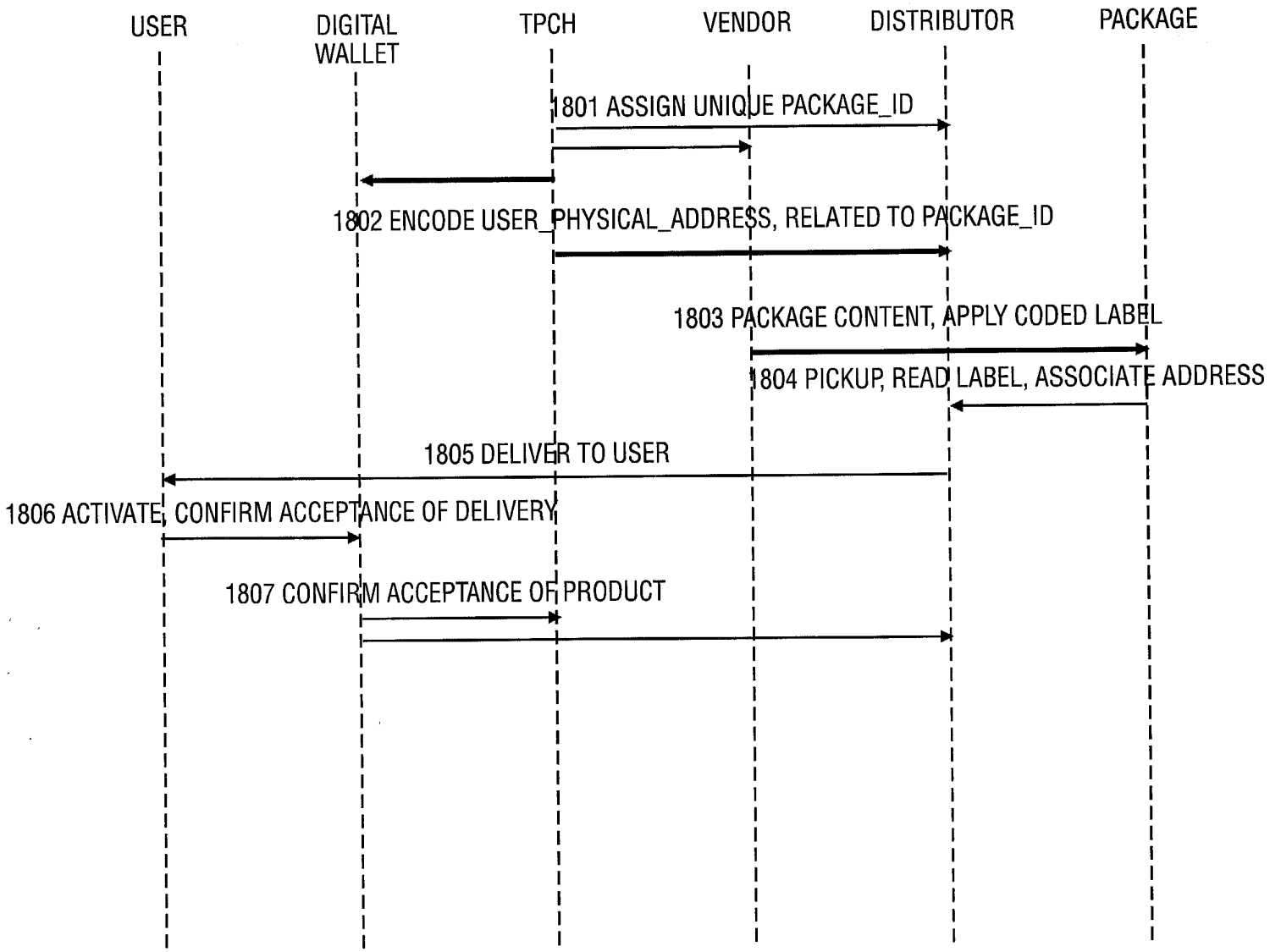


FIG. 18

TOE240 "9T5EE260

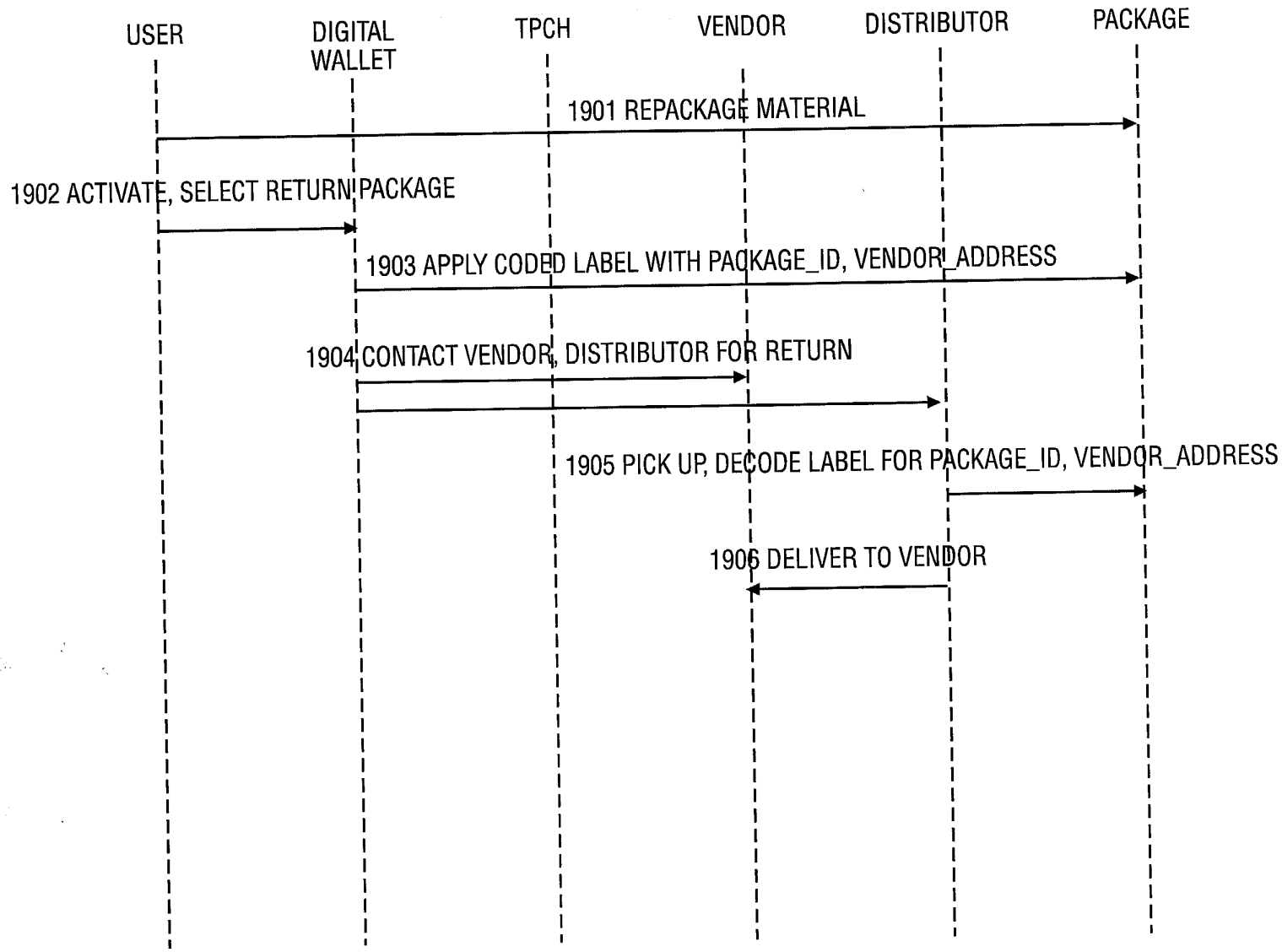


FIG. 19

TOE2HO* 9TSEE260

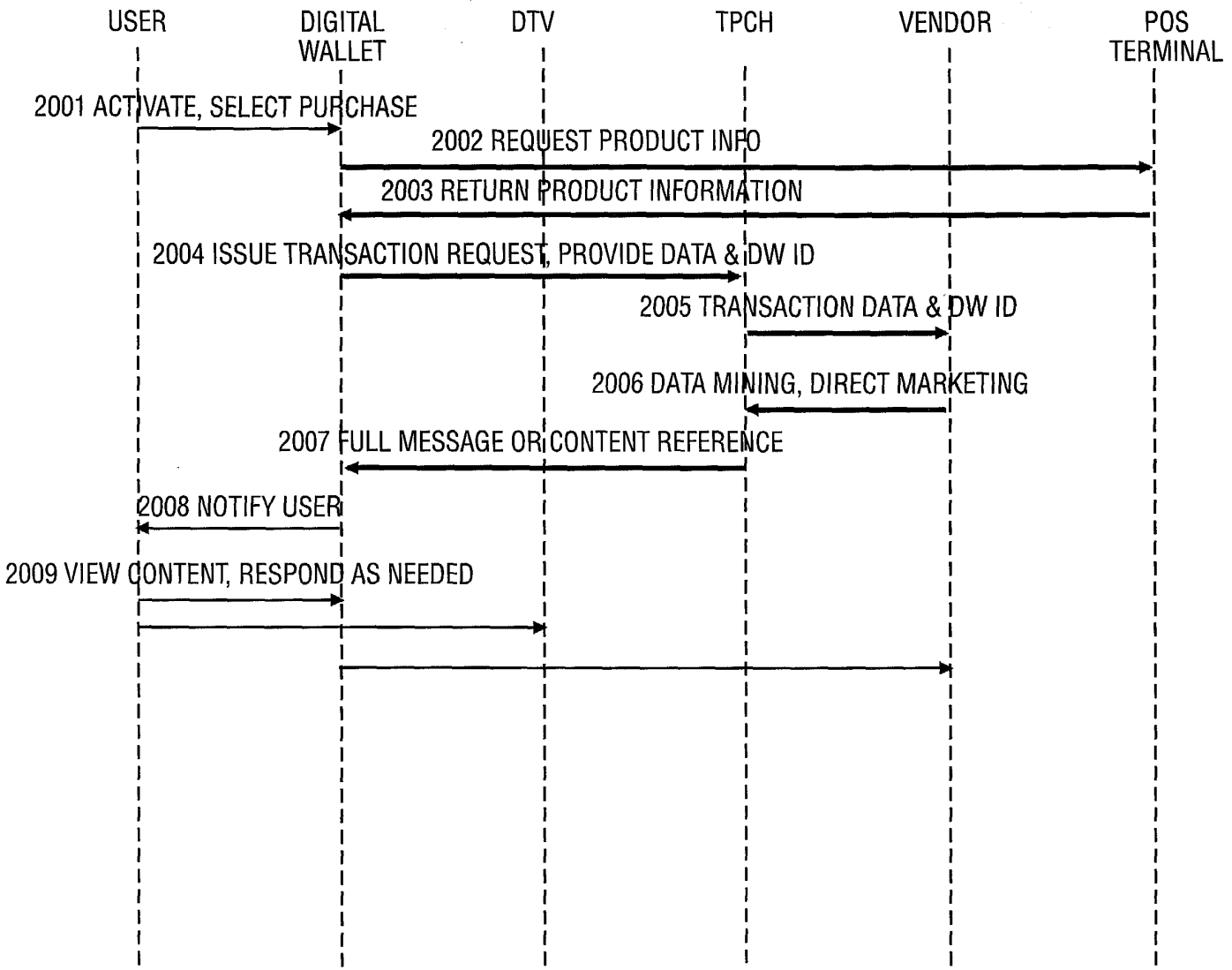


FIG. 20

TOEHO 9T5EE260

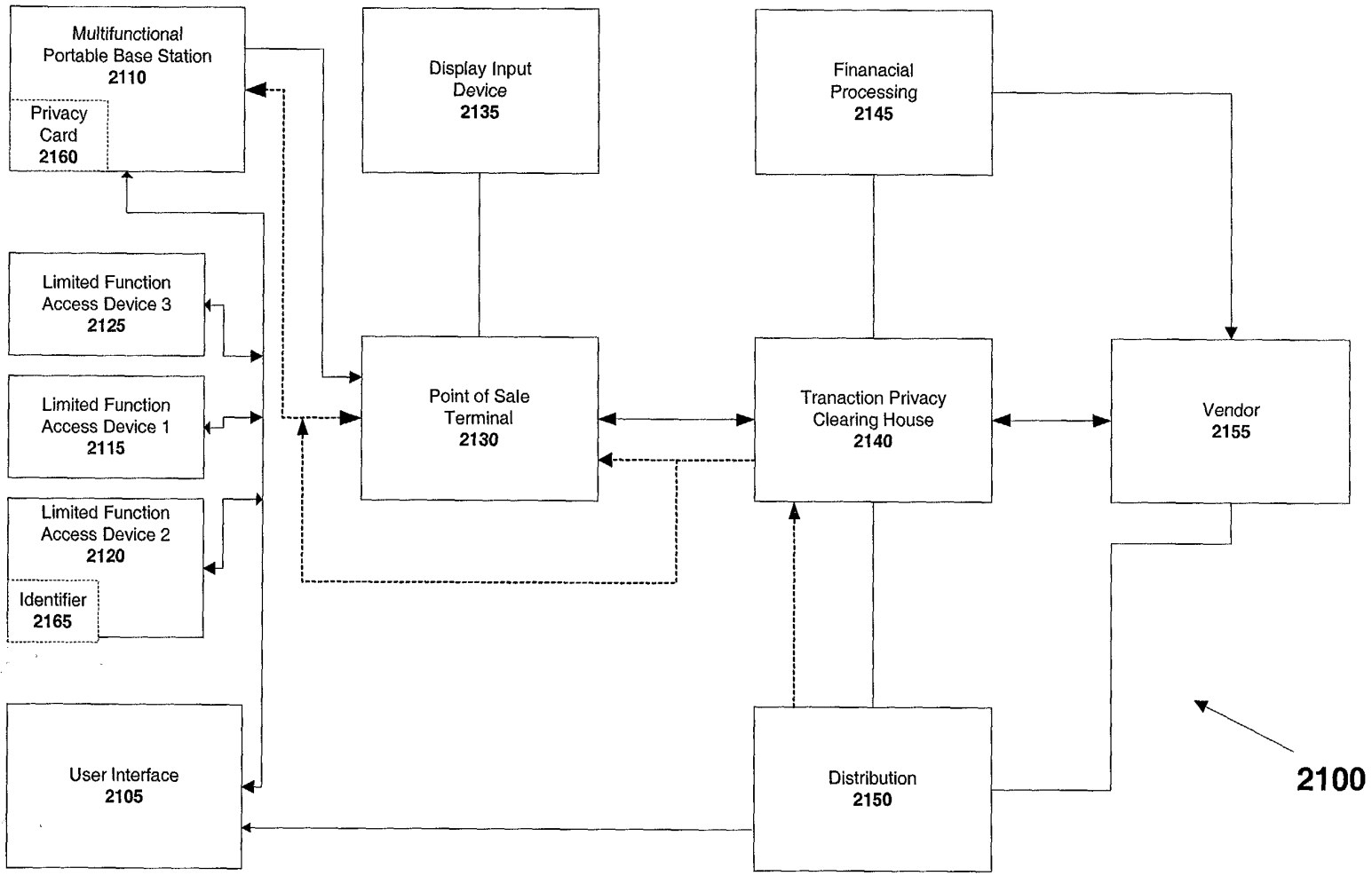


Figure 21

TOE240 "9TSEE260

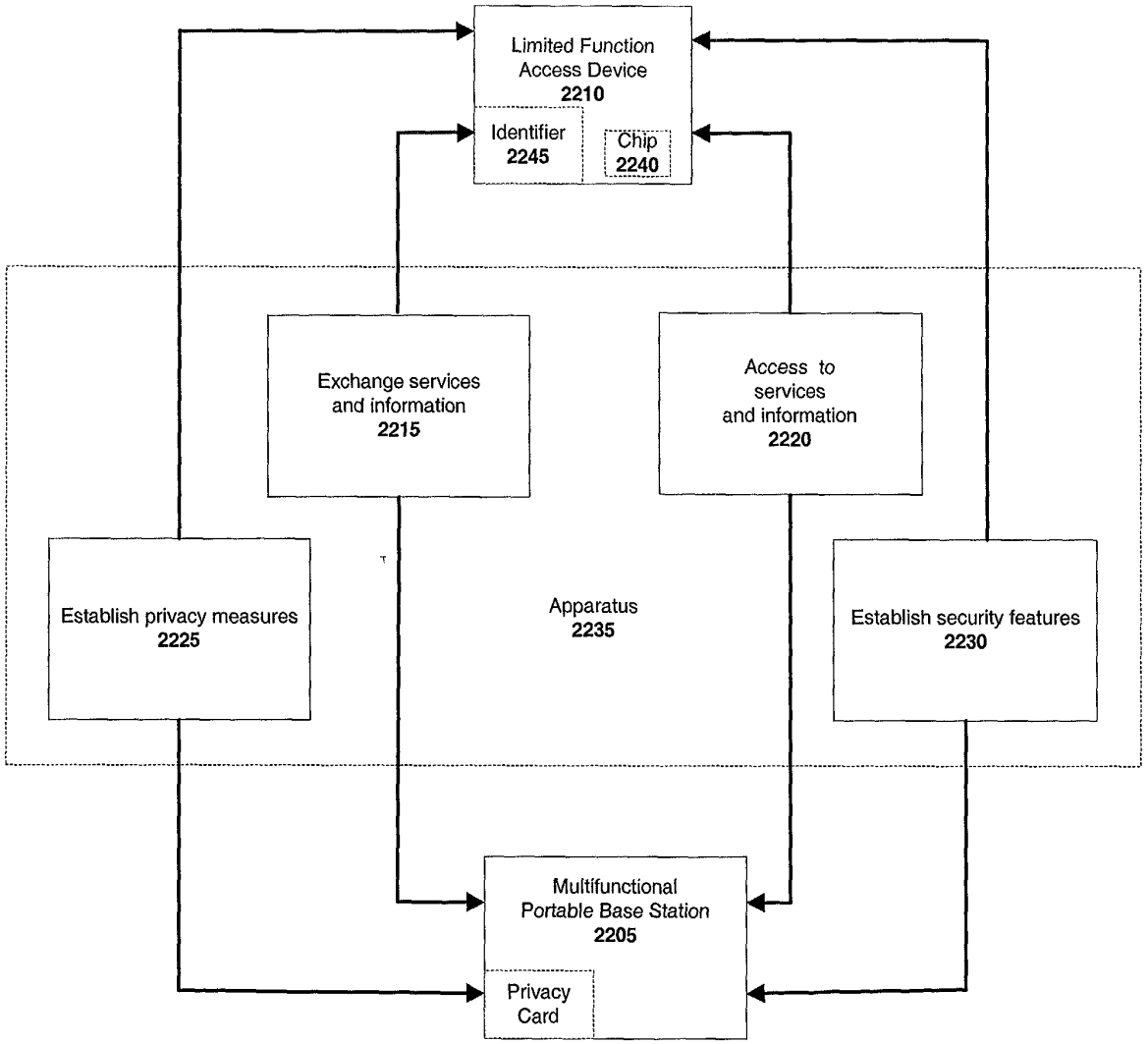


Figure 22